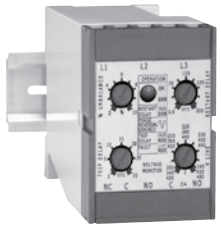
Universal 3 Phase Voltage Monitor
DLMU Series (SPDT & N.O.)
Universal Voltage Motor Protector

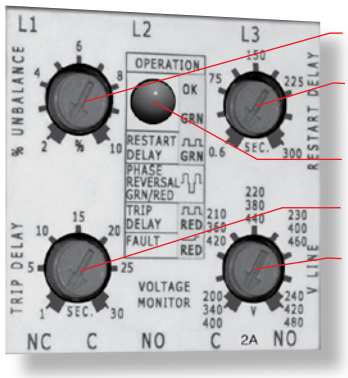
3 Phase Voltage Monitor



ANSI Device #27/47/59

- Protects Against: Phase Loss, Phase Reversal, Over, Under and Unbalanced Voltages, Over/Under Frequency
- 35 mm DIN Rail or Surface Mounting
- SPDT Isolated 10 A Relay Contacts
- N.O. Isolated 2A Relay Contact
- LED Indicates, Relay, Faults, & Time Delays
- Universal Line Voltage 240 ... 480 V AC in One Unit
- Finger-safe Terminal Blocks, up to 12 AWG
- ASME A17.1 rule 210.6
- NEMA MG1 14:30, 14:35
- IEEE C62.41-1991 Level B

Complete Product Details:
http://www.ssac.com/pp1.htm



Improved Phase Loss Protection
Adjustable, 2 to 10%, unbalance protection.

Anti-Short Cycle & Staggered Restarting
0.6 to 300 s prevents rapid cycling. Allows staggered restarting of multiple systems on a common power distribution network.

LED Indicates Phase Reversal
LED status indicator blinks red/green on phase reversal.

Prevents Nuisance Tripping
Adjustable trip delay from 1 to 30 Sec.

Universal Voltage Operation
In 3 ranges. Adjust to the motor's operating voltage and the unit automatically sets the over and under voltage trip points.

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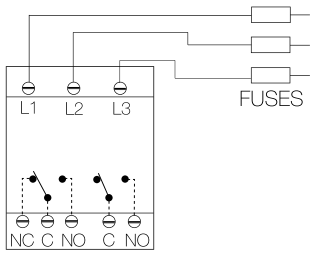
Operation

Upon application of line voltage, the output is de-energized and the restart delay begins. If all the three phase voltages are within the acceptable range, the output energizes at the end of the restart delay. The microcontroller circuitry automatically senses the voltage range, and selects the correct operating frequency (50 or 60hz). The over and under voltage trip points are set at approximately +/- 10% of the adjusted line voltage. When the measured value of any phase voltage exceeds the acceptable range limits (lower or upper) the trip delay begins. At the end of the trip delay the output relay de-energizes. Under, over, and unbalanced voltages plus over or under frequency must be sensed for the complete trip delay before the unit trips. The unit trips in 200 ms when phase loss or reversal are sensed. The unit will not energize if a fault is sensed as the line voltage is applied. Both Delta and Wye systems can be monitored; no connection to neutral is required.

Reset: Reset is automatic upon correction of the voltage or frequency fault or phase sequence.

Connection



CAUTION: 2 amp max. fast acting fuses are recommended to protect the equipment's wiring. They are not required to protect the DLMU.

Dashed lines are internal connections.

L1, L2, L3 = Line Voltage Input
NO = Normally Open Contact NC = Normally Closed Contact
C = Common, Transfer Contact
Note: Relay contacts are isolated, 277 V AC max.

R= Restart Delay on fault correction

The restart delay begins when line voltage is reapplied or when a voltage fault is corrected. This option is normally selected when staggered restarting of multiple motors on a power system is required.

Technical Data

Phase Loss	
Response Time	≤200ms
Trip Point	>=25% Unbalance
Over/Under Frequency Trip / Reset	Trip +/- 4%; Reset +/- 3%; 50 or 60 Hz
Output	
SPDT (c/o) Rating	10 A resistive at 240 V AC; 8 A resistive at 277 V AC; N.O-1/4 hp at 120 V AC; 1/3 hp at 240 V AC
N. O. SPST Rating	2 A resistive at 240 V AC
Mechanical	
Mounting	Surface mount with 2 #8 (M4 x 0.7) screw or snap on 35mm DIN Rail
Package	4.33 x 2.95 x 1.97 in. (110 x 75 x 50 mm)
Termination	Screw terminals with captive wire clamps for up to #14 AWG (2.5 mm2) wire
Degree of Protection	Terminals IP20 with protective covers installed

LED Flashing Table

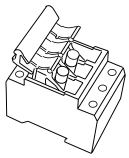
Trip Delay	Red	ON/OFF	120 FPM*
Restart Delay	Green		60 FPM*
Phase Reversal	Red/Green	Alternate	120 FPM*

*FPM = Flashes per minute

Ordering Table

Part Number	Line Voltage	Output Form	Adj. Unbalance	Adj.Trip Delay	Adj. Restart
DLMUDRAAA	200 to 480 V AC	SPDT & NO	2 to 10%	1 to 30 S	0.6 to 300 S

Accessories



3-Pole Fuse Block
P/N: FH3P
35mm DIN Rail Mounting

2 Amp Midget Fuse
P/N: P0600-11

See accessory pages

DLMUpp 01.18.08